

Product datasheet for **RG231882**

Microsomal Glutathione S transferase 1 (MGST1) (NM_001260511) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Microsomal Glutathione S transferase 1 (MGST1) (NM_001260511) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: MGST1
Synonyms: GST12; MGST; MGST-I
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG231882 representing NM_001260511
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGTTGACCTCACCCAGGTAATGGATGATGAAGTATTCATGGCTTTTGCATCCTATGCAACAATTATTC
 TTTCAAAAATGATGCTTATGAGTACTGCAACTGCATTCTATAGATTGACAAGAAAGGTTTTTGCCAAATCC
 AGAAGACTGTGTAGCATTGGCAAAGGAGAAAAATGCCAAGAAGTATCTTCGAACAGATGACAGAGTAGAA
 CGTGTACGCAGAGCCACCTGAATGACCTTAAAAATATTATCCATTTCTTGAATTGGCCTCCTGTATT
 CCTTGAGTGGTCCCGACCCCTACAGCCATCCTGCACCTCAGACTATTTGTCGGAGCACGGATCTACCA
 CACCATTGCATATTTGACACCCCTCCCGACCAAATAGAGCTTTGAGTTTTTTGTTGGATATGGAGTT
 ACTCTTCCATGGCTTACAGTTGCTGAAAAGTAAATTGTACCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG231882 representing NM_001260511
 Red=Cloning site Green=Tags(s)

MVDLTQVMDEVFMAFASYATIILSKMMLMSTATAFYRLTRKVFANPEDCVAFGKGENAKKYLRTDDRVE
 RYRRAHLNDLENIIPFLGIGLLYSLSGPDPSTAILHFRLFVVGARIYHTIAYLTPLPQPNRALSFFVGYGV
 TLSMAYRLLKSKLYL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

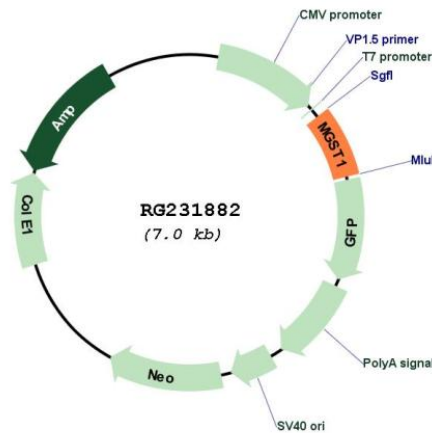


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Cloning Scheme:



Plasmid Map:



ACCN: NM_001260511

ORF Size: 465 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_001260511.1</u> , <u>NP_001247440.1</u>
RefSeq Size:	937 bp
RefSeq ORF:	468 bp
Locus ID:	4257
UniProt ID:	<u>P10620</u>
Cytogenetics:	12p12.3
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450
Gene Summary:	The MAPEG (Membrane Associated Proteins in Eicosanoid and Glutathione metabolism) family consists of six human proteins, two of which are involved in the production of leukotrienes and prostaglandin E, important mediators of inflammation. Other family members, demonstrating glutathione S-transferase and peroxidase activities, are involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. This gene encodes a protein that catalyzes the conjugation of glutathione to electrophiles and the reduction of lipid hydroperoxides. This protein is localized to the endoplasmic reticulum and outer mitochondrial membrane where it is thought to protect these membranes from oxidative stress. Several transcript variants, some non-protein coding and some protein coding, have been found for this gene. [provided by RefSeq, May 2012]